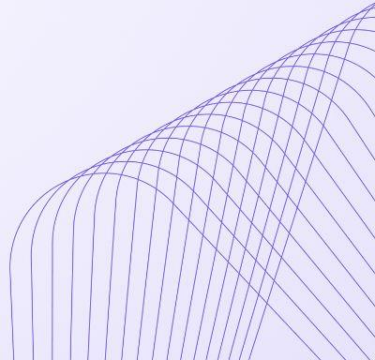




Closing the Developer Experience Gap of Kubernetes Development





Hello!

**My name is
Edidiong Asikpo**



Hello!

**My name is
Edidiong Asikpo**

A Senior Developer Advocate at Ambassador Labs, CNCF Ambassador and Technical Content Creator who loves building, writing and sharing knowledge.



Hello!

**My name is
Edidiong Asikpo**

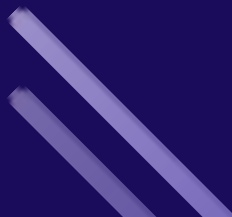
A Senior Developer Advocate at Ambassador Labs, CNCF Ambassador and Technical Content Creator who loves building, writing and sharing knowledge.

Social media - @didicodes



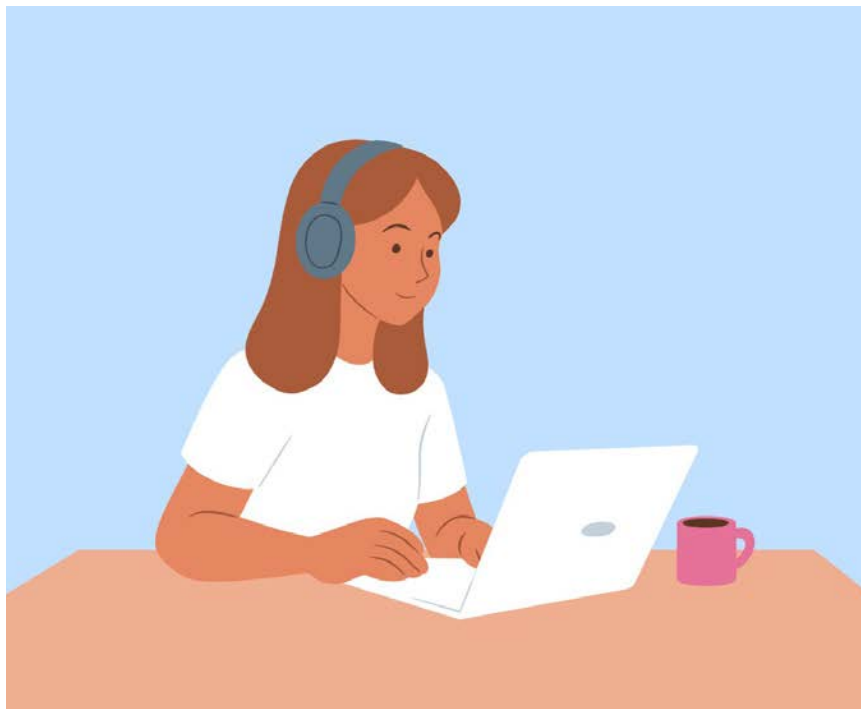
Kubernetes & containerization has solved many challenges businesses face

- Flexibility
- Scaling
- Reliability of the release of new versions



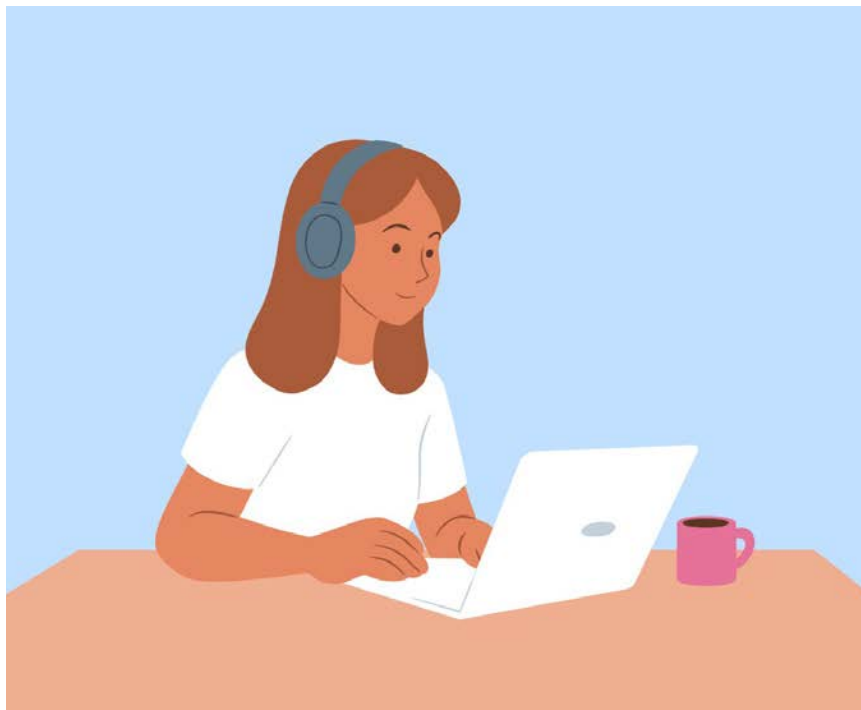


What's developer experience?



Developer experience is the workflow a developer uses to develop, test, deploy, and release software.

What's developer experience?

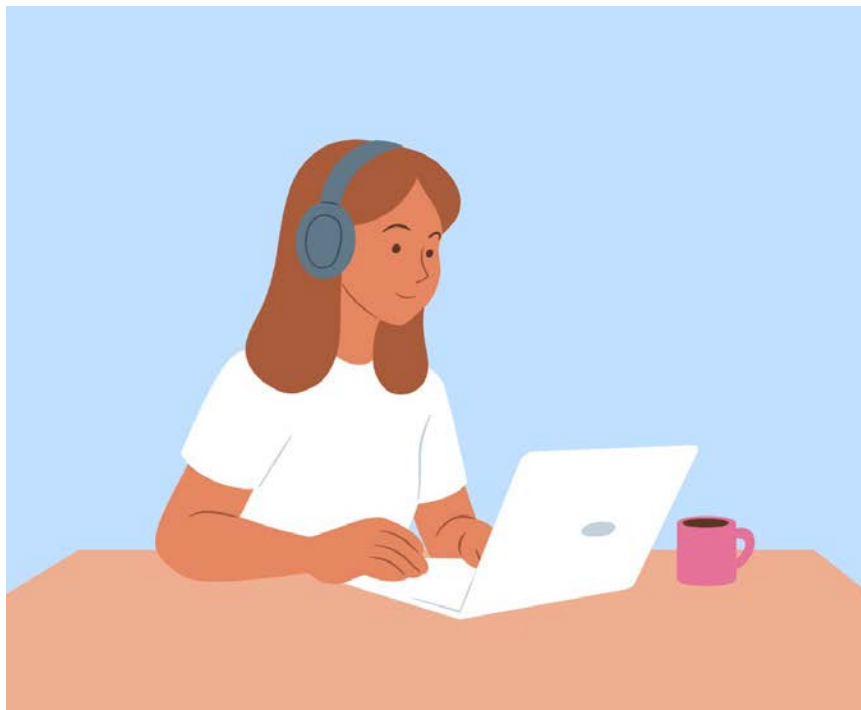


Developer experience is the workflow a developer uses to develop, test, deploy, and release software.

Typically, this experience consists of the:

- **Inner development loop**

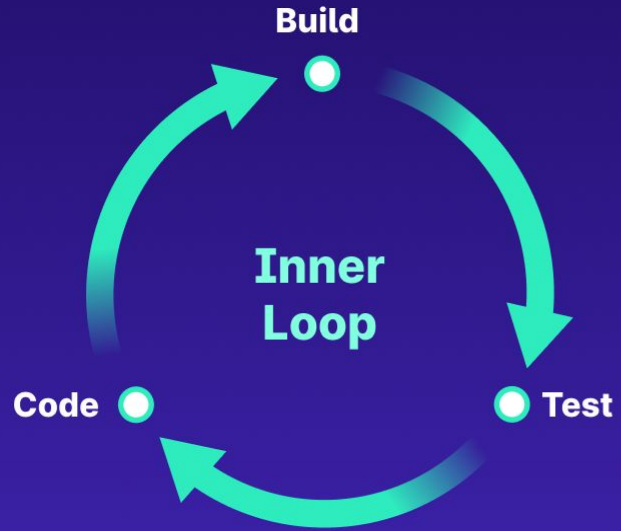
What's developer experience?

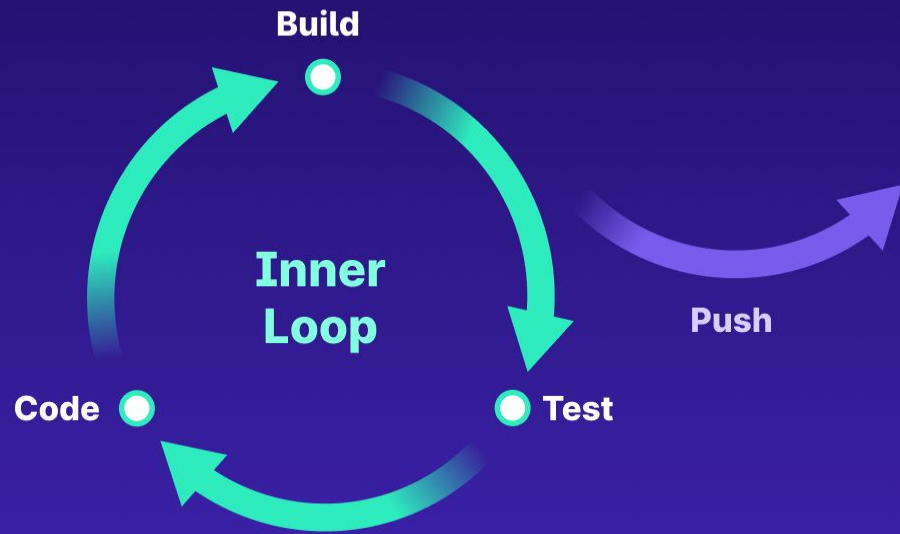


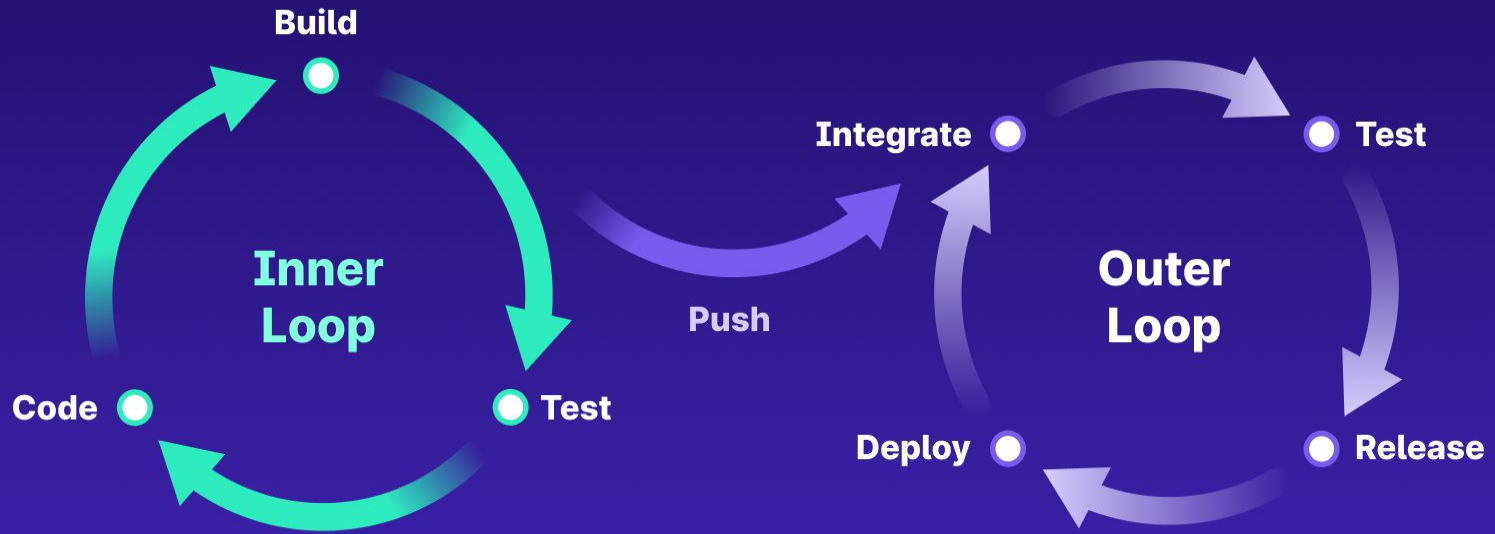
Developer experience is the workflow a developer uses to develop, test, deploy, and release software.

Typically, this experience consists of the:

- **Inner development loop**
- **Outer development loop**









Cloud native technologies have altered the developer experience in two ways:



Cloud native technologies have altered the developer experience in two ways:

1. Extra steps in the inner dev loop



Cloud native technologies have altered the developer experience in two ways:

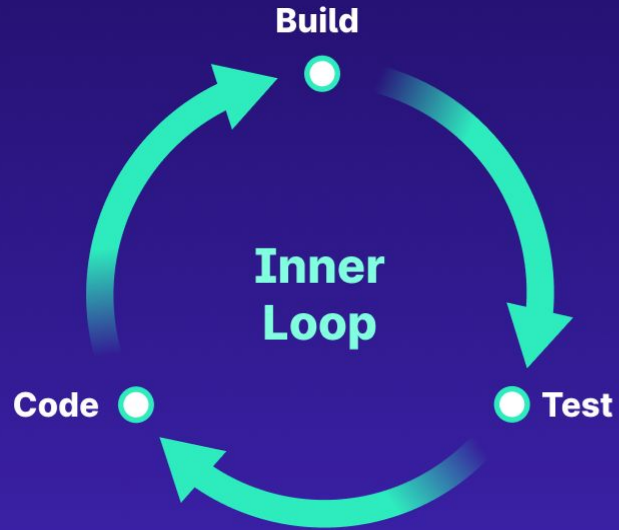
1. Extra steps in the inner dev loop
2. Developers involvement with outer dev loop



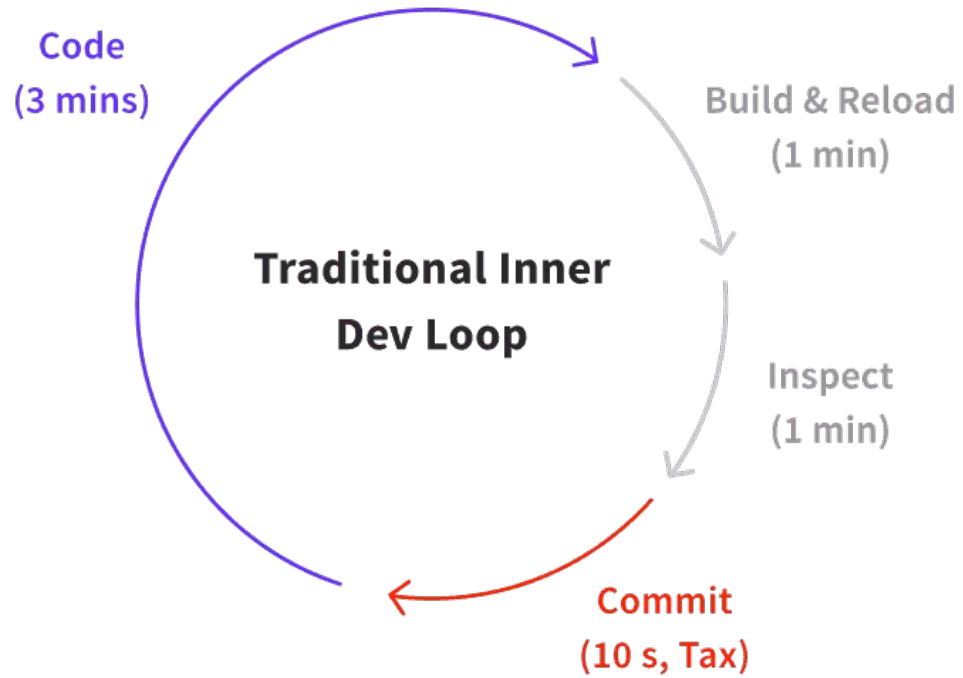
Cloud native technologies have altered the developer experience in two ways:

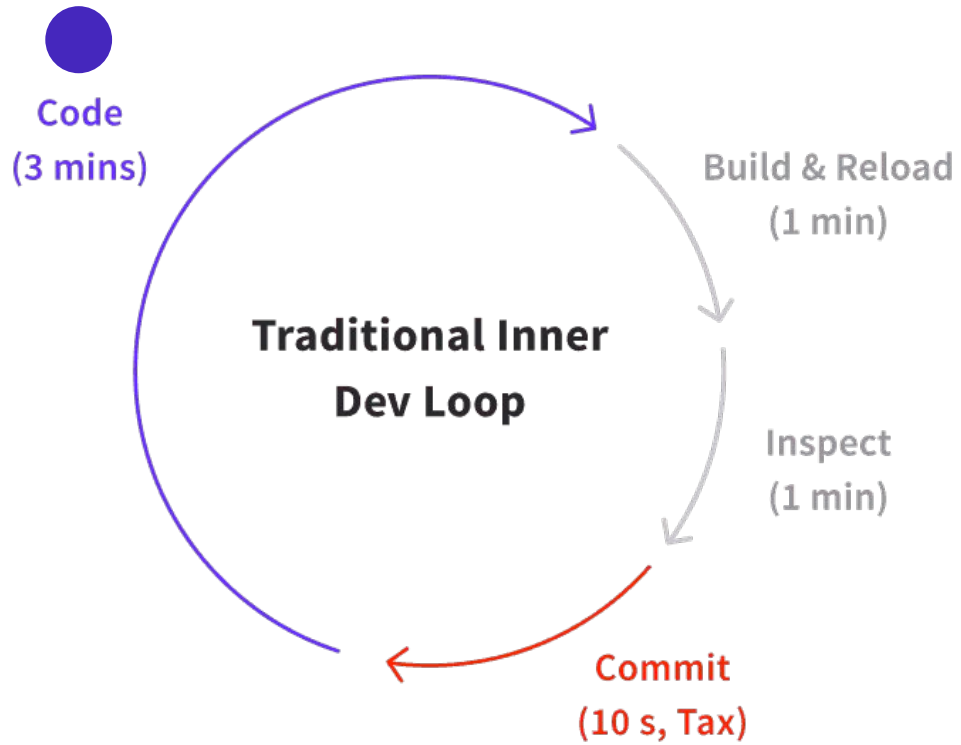
1. Extra steps in the inner dev loop
2. Developers involvement with outer dev loop

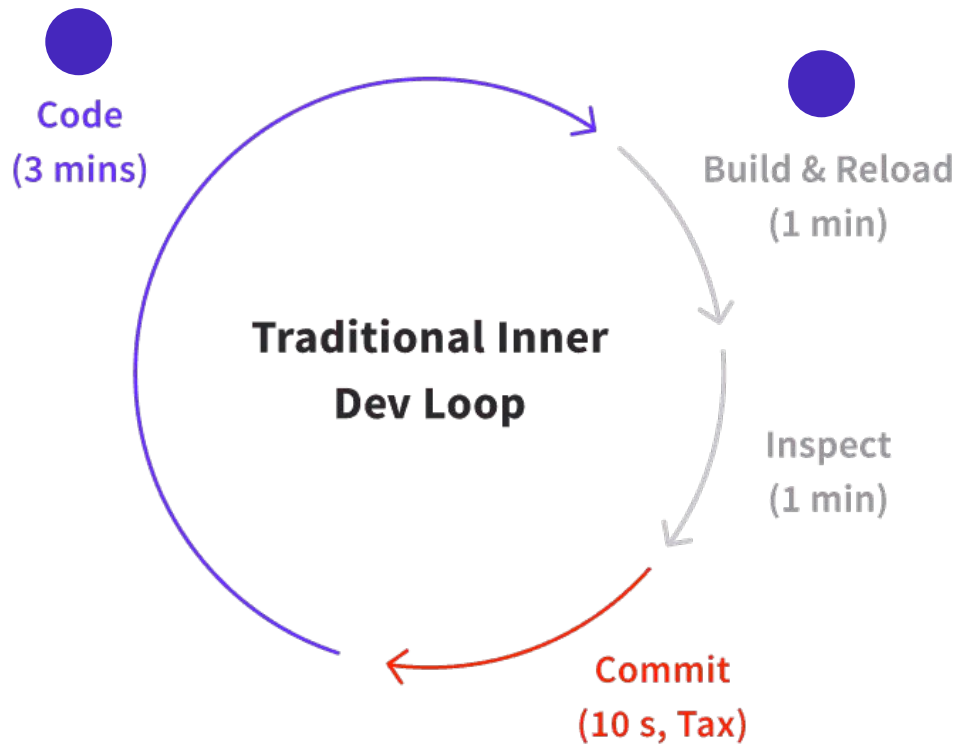
This comes with its benefits & disadvantages!

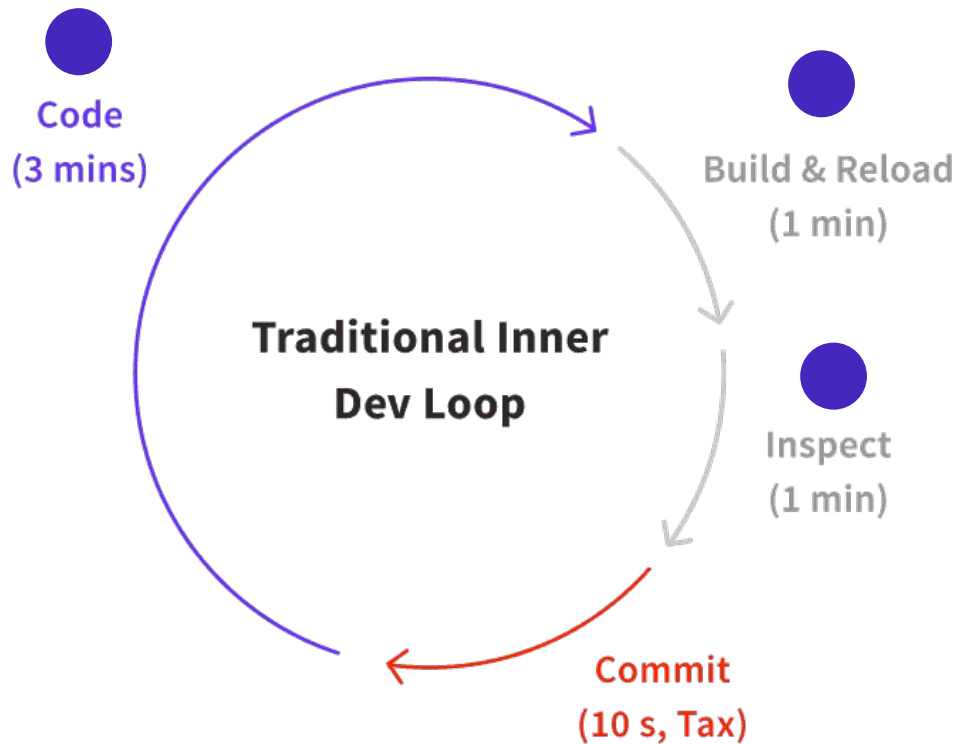


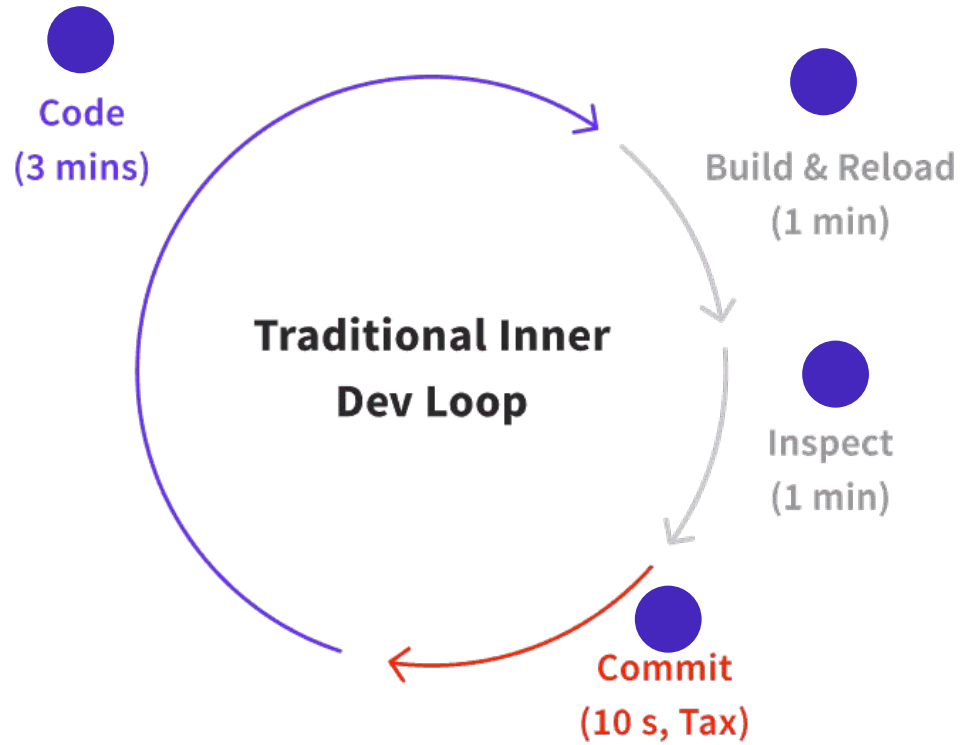
This is where debugging happens!

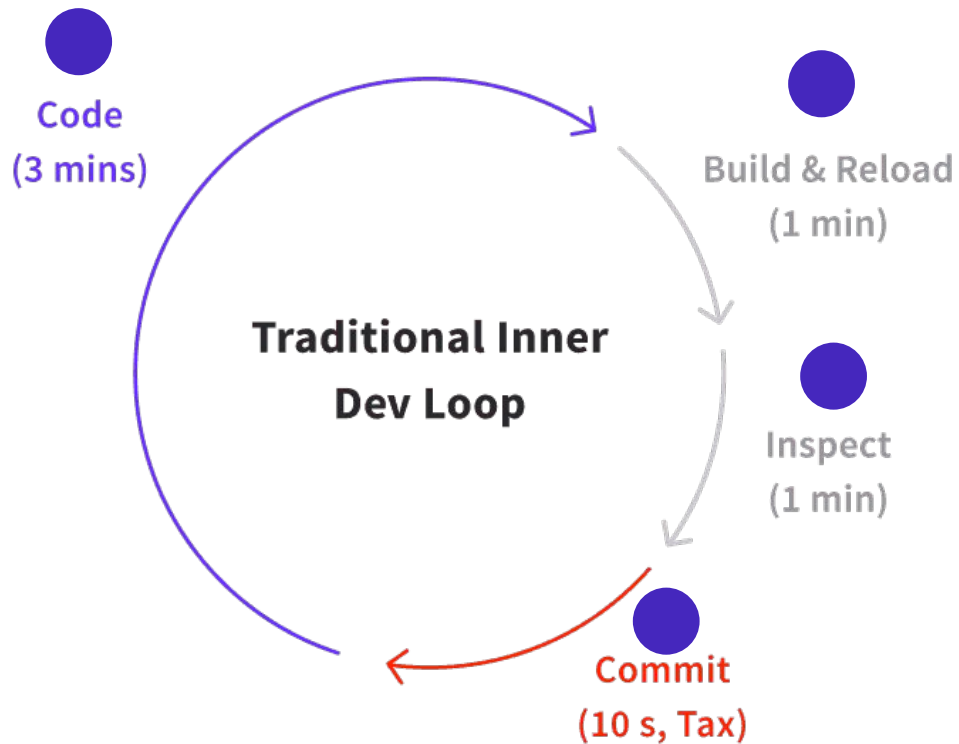




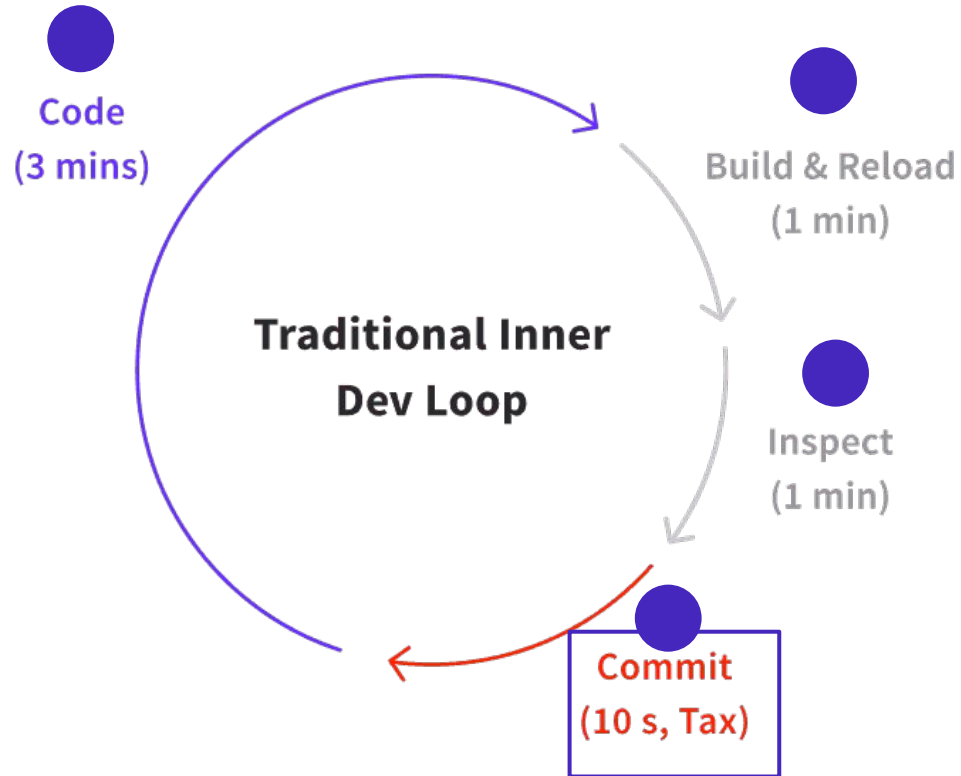




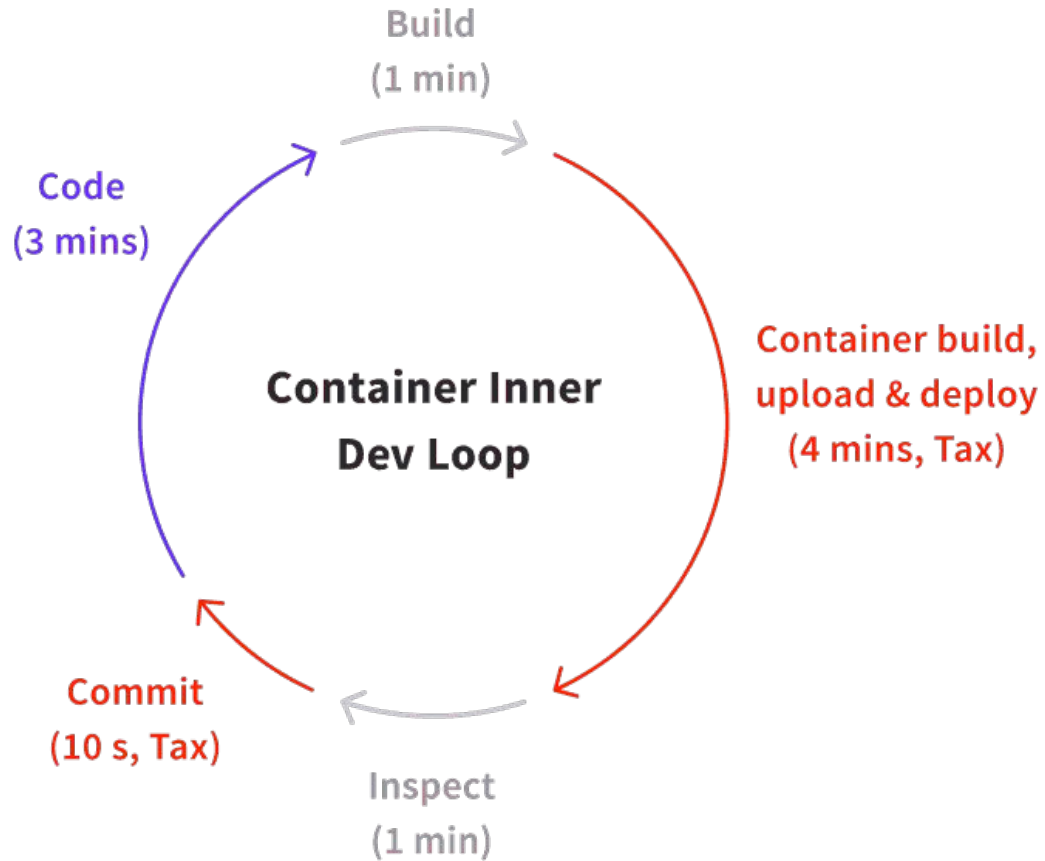


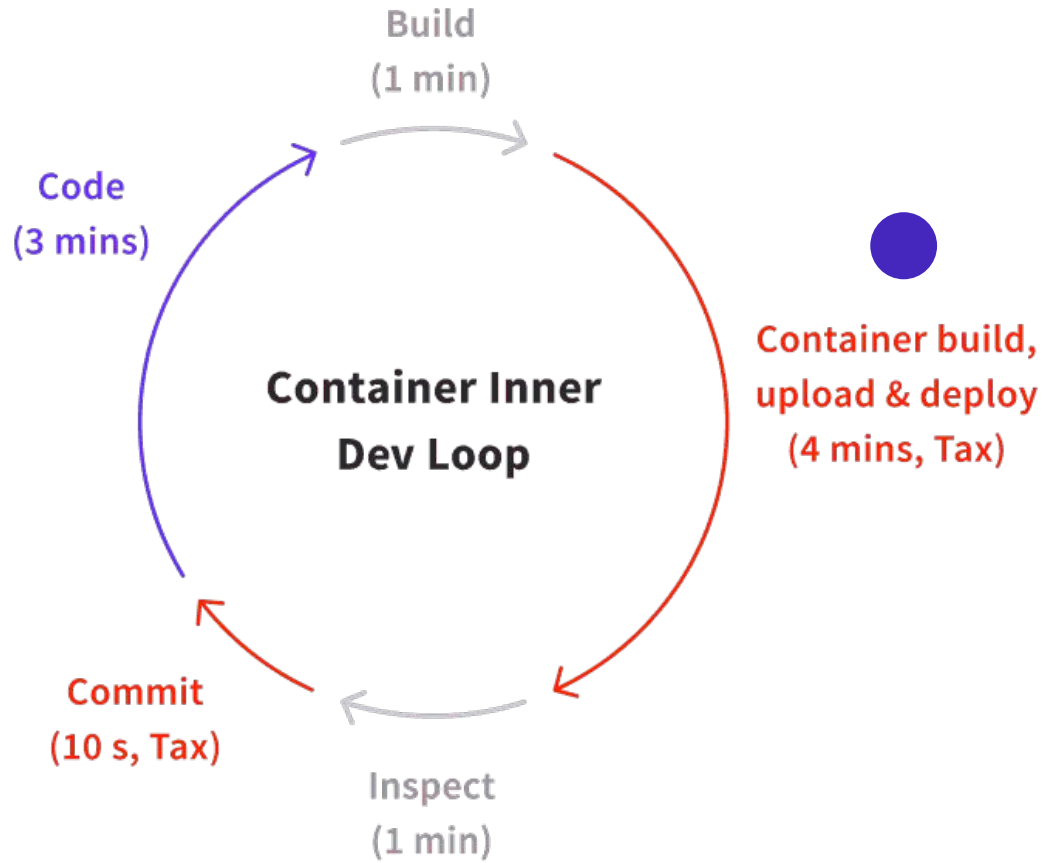


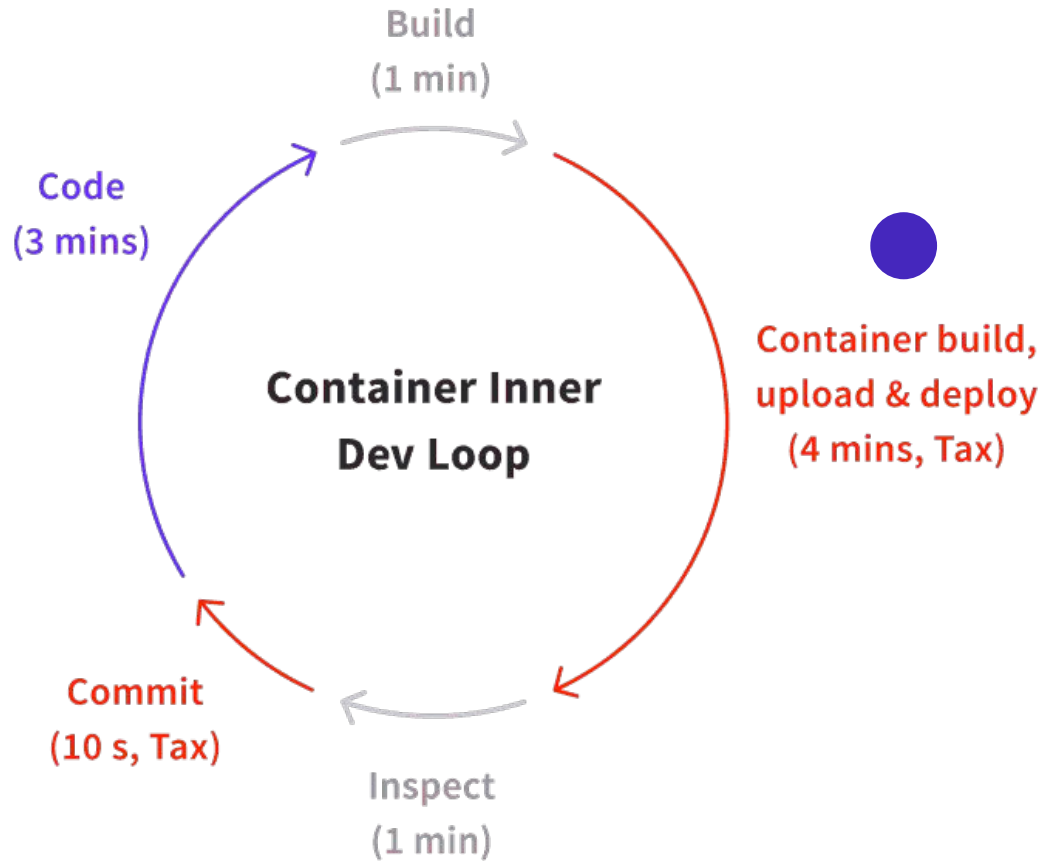
~70 iterations of their code per day



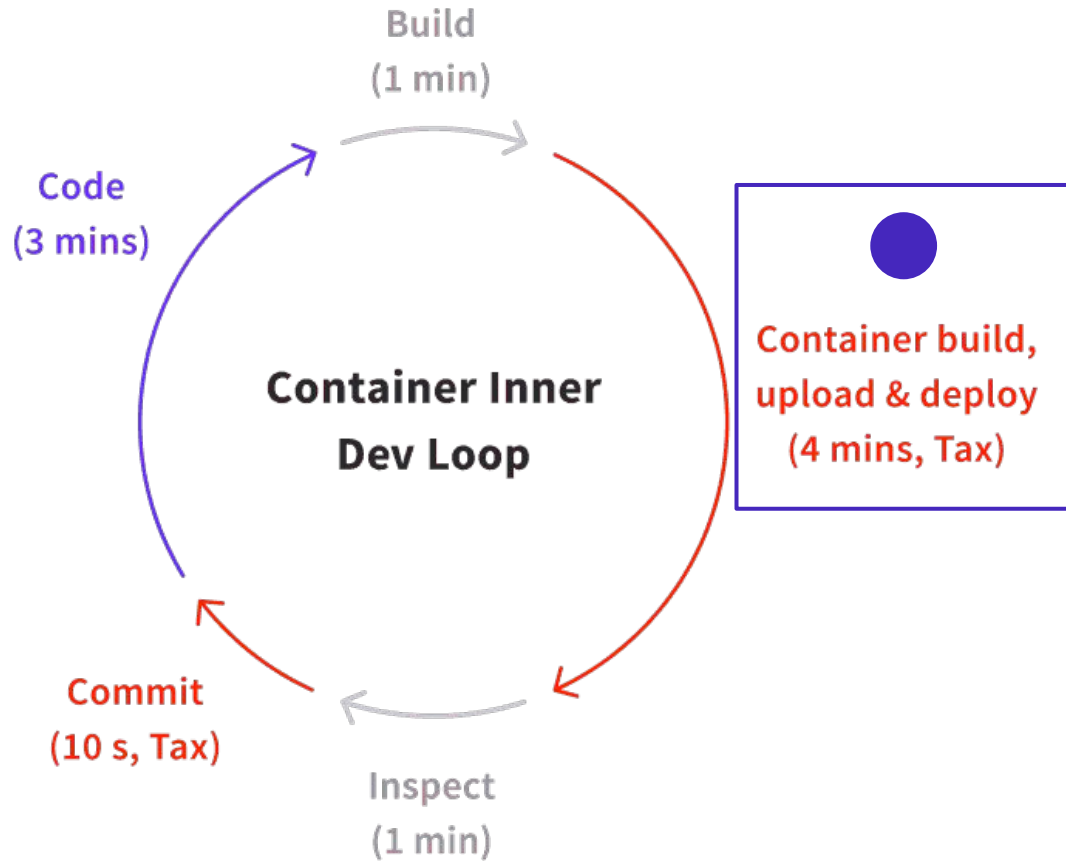
~70 iterations of their code per day







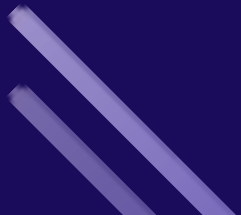
Iterations per day drops from 70 to 40



Iterations per day drops from 70 to 40

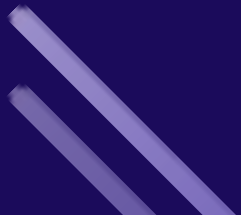
A slow inner dev loop impacts everyone!

- Frontend developers have to wait for previews of backend changes on a shared dev environment or rely on mocks when coding their application locally.



A slow inner dev loop impacts everyone!

- Frontend developers have to wait for previews of backend changes on a shared dev environment or rely on mocks when coding their application locally.
- Backend developers have to wait for CI/CD to build & deploy their app to a target environment to verify that their code works correctly.



A slow inner dev loop impacts everyone!

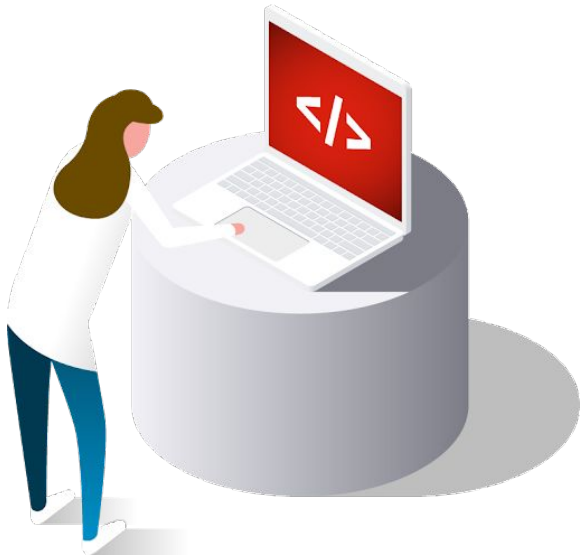
- Frontend developers have to wait for previews of backend changes on a shared dev environment or rely on mocks when coding their application locally.
- Backend developers have to wait for CI/CD to build & deploy their app to a target environment to verify that their code works correctly.
- This slows releases into production overall thereby impacting the business and end users at large.

Is there a way out?





Local Development



THE GOOD



Fast dev
loop



Low
cost

THE BAD

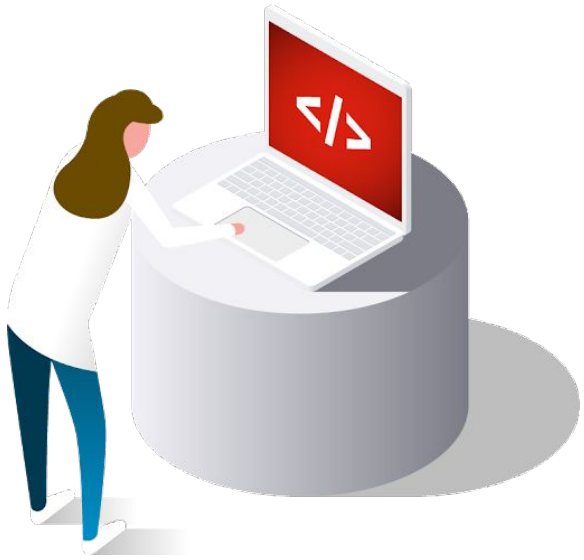


High
maintenance



Hot
workstations

Local Development



THE GOOD



Fast dev
loop



Low
cost

THE BAD



High
maintenance



Hot
workstations

Remote Development



THE GOOD



Normal
temp



Low
maintenance

THE BAD



High
cost



Slow
development

Remote Development



THE GOOD



Normal
temp



Low
maintenance

THE BAD



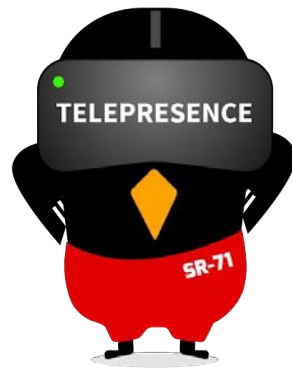
High
cost



Slow
development

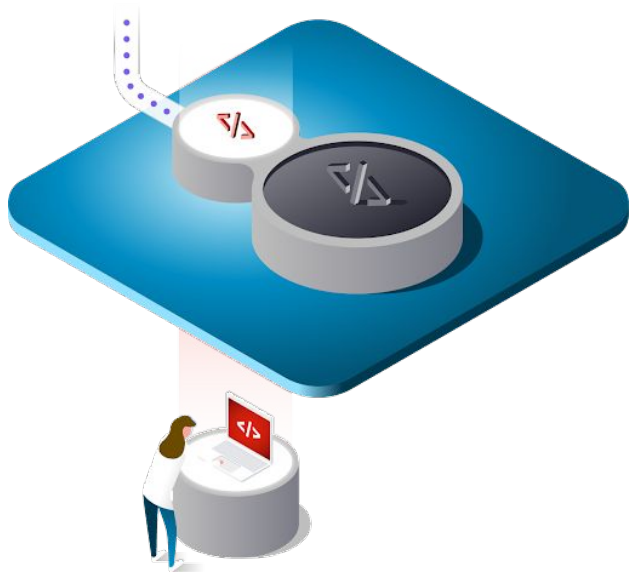


Local Development



Remote Development

Remocal Development



THE GOOD



Low
cost



Low
maintenance



Normal
temp



Fast dev
loop

What is Telepresence?



CLOUD NATIVE
COMPUTING FOUNDATION



What is Telepresence?

- A tool that simplifies how teams test and debug on Kubernetes



What is Telepresence?

- A tool that simplifies how teams test and debug on Kubernetes
- Connects your local machine to a cluster via a two-way proxying mechanism



What is Telepresence?

- A tool that simplifies how teams test and debug on Kubernetes
- Connects your local machine to a cluster via a two-way proxying mechanism
 - Access cluster's services as if they are running locally



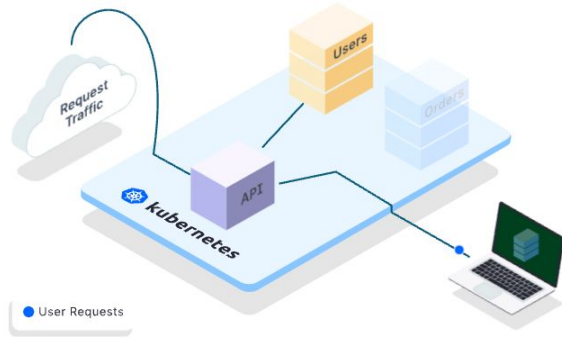
What is Telepresence?

- A tool that simplifies how teams test and debug on Kubernetes
- Connects your local machine to a cluster via a two-way proxying mechanism
 - Access cluster's services as if they are running locally
 - Reroute cluster's traffic to your local service



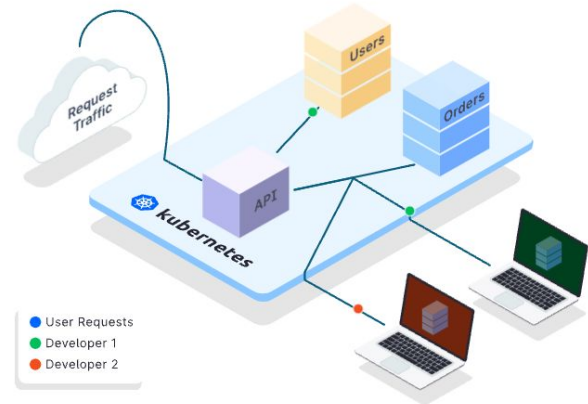
CLOUD NATIVE
COMPUTING FOUNDATION





Global

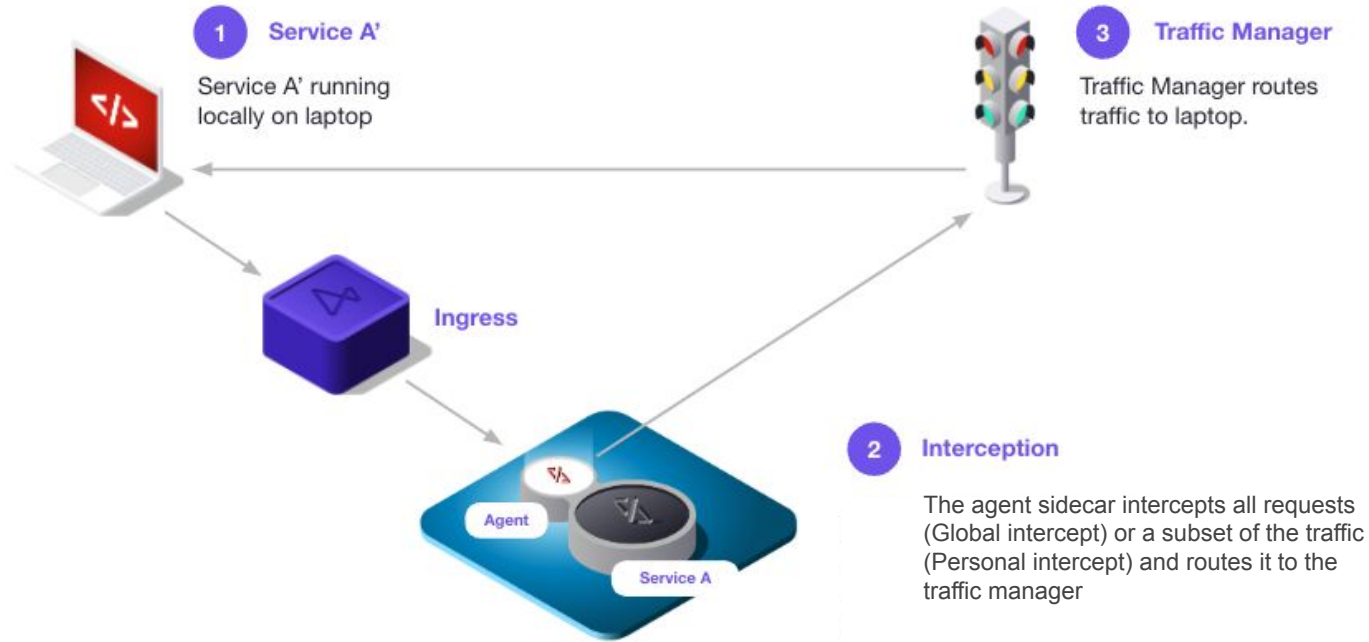
All requests to the service are intercepted and forwarded



Personal

Only requests with the HTTP header are intercepted and forwarded

How does Telepresence work?



Demo Time 🎉

Without Telepresence 🙄

A not so great developer experience

- They bore the operational & resource burden of running all their microservices locally
- Couldn't utilize the benefits of both the "local" & "remote" K8s development methods
- Code → Build container → Push to registry → Deploy & wait → Test



With Telepresence 🎉

An improved developer experience

- The operational & resource burden of running all their microservices locally was removed
- They got the best of both worlds (local and remote Kubernetes development)
- Code → Intercept → Test

Wrapping up 🎉

- Kubernetes development teams should have a developer experience that allows them to focus on the things that matter (e.g., coding, testing, iterating).
- Instead of the things that don't (e.g., waiting for the build/push/test cycle to be completed or discovering a bug in production because it was missed during testing due to an unrealistic testing environment)
- This will increase productivity and the number of updates shipped to production.
- Telepresence gives you that all round developer experience as it bridges the gap between clusters and local dev environment

 ambassador



Try Telepresence today!

We are currently running a 30 day free trial

getambassador.io/products/telepresence





Thank you!

Any questions?